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ABSTRACT

Three types of educational evaluation--student learning, summative, and formative--are identified and described. Major emphasis is placed upon formative evaluation, which takes place over a period of time and is performed by professors rather than external evaluators or judges. Four possible targets for formative evaluations are: course content and organization: teacher roles: program evaluation: and assessment of special projects or innovations. Any formative evaluation program should be flexible, well directed, and confidentially conducted. The author describes a seven-step evaluation system used at McGill University between 1976 and 1978, and documents an actual case study of one professor's evaluation done in this system. Another formative evaluation system recommended for classroom performance techniques is the Teaching Improvement Process, developed by the University of Massachusetts. Every evaluation system should be subjected to periodic systematic evaluations. The key to a flexible formative evaluation system lies with the honesty of professors themselves, and a commitment to providing excellent education within a wide range of individual styles, subject areas and class types. (DC)

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Evaluation of Teaching for Improvement

Dr. Patricia A. Cranton

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Report #1
September, 1978

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Preface

The Standing Committee on Teaching of the Faculty of Education at The University of British Columbia has as its goal the promotion of quality teaching and teaching improvement within the Faculty. Consistent with this goal, we invite leading educators and research and development specialists to visit our faculty from time to time to share their expertise and exchange ideas about teaching and teaching improvement.

We were fortunate that Dr. Patricia A. Cranton of the Centre for Learning and Development at McGill University, Montreal, was able to respond affirmatively to our invitation to visit our campus on March 6 and 7, 1978. Dr. Cranton's activities here included technical consultations on research and development with members of the Standing Committee on the Evaluation of Teaching (SCET), the Standing Committee on Teaching (SCOT), and the nascent Centre for Improving Teaching and Evaluation (CITE), advising particularly on measurement and computer-based activities of these groups. Additionally, she conducted, during the two days she was here, a large number of personal consultations with faculty members concerned with teaching improvement, course development, and program evaluation. During the noon hour on Monday, March 6, 1978, Dr. Cranton presented a colloquium in the Faculty of Education's main auditorium. This colloquium, entitled "The Evaluation of Teaching for Improvement," was attended by faculty members from across the campus.

In response to requests for copies of the text of Dr. Cranton's colloquium, the Standing Committee on Teaching has prepared, with the kind assistance and permission of Dr. Cranton, a typescript version. It is our hope and intention that making Dr. Cranton's talk available in this format

will facilitate the widespread impact of the points included in her paper. Recipients of this document having further questions or comments concerning its contents are encouraged to communicate directly with the author at the Centre for Learning and Development at McGill University, or to the sponsors of the document, the Standing Committee on Teaching, Faculty of Education, The University of British Columbia. If you desire to receive additional copies of this paper or other papers forthcoming in this series, send your requests to the Standing Committee on Teaching.

Stephen F. Foster and J. Gordon Nelson

Vancouver, B.C.
March, 1978

EVALUATION OF TEACHING FOR IMPROVEMENT[1].

Colloquium: March 6, 1978
The University of British Columbia

Presented by: Dr. P. A. Cranton
Centre for Learning and Development
McGill University

I. What is evaluation?

The word "evaluation" has strong associations for all of us; we associate evaluation with being "judged," and consequently, with the possibility of failure. Evaluation is basically a judging process - it is usually defined as the procedure of collecting information in order to make assessments, judgements or decisions. The "failure" component of evaluation, however, need not exist. I will define three different types of evaluation, at least one of which does not contain the failure component.

II. Types of evaluation in higher education.

The term evaluation is used in conjunction with three quite different processes in higher education. First, and perhaps most commonly, we discuss the evaluation of student learning. This includes the construction of tests for student achievement, and the grading of students. Secondly, we are concerned with the evaluation of courses, programs, projects and teaching effectiveness for the purpose of administrative decision-making. The evaluation, however it may be conducted, leads to a final decision on the acceptance of a new program, the renewal of project funding, the hiring or promotion of staff. This final judgement type of evaluation is often referred to as summative. Thirdly, evaluation is used in the process of improvement, development, or change. Here evaluation is a cyclical process - no final judgements are made. Rather, evaluation is a part of a developmental process, which leads to change which in turn leads to further evaluation. It is this third type of evaluation that I will emphasize

today, although there will be obvious overlaps with the other two categories. Evaluation for improvement is often referred to as formative evaluation.

III. Formative evaluation.

Formative evaluation has several distinctive characteristics. It is on-going, that is, it takes place throughout the duration of a course, or over a semester, or over several semesters. The evaluation process is a part of the development of the course or of the faculty member's skills as a teacher; it is not something done at the end of a course to assess overall effectiveness. The professor himself is responsible for the evaluation - he decides what aspects of the course or of his teaching performance he is interested in, he decides how information will be collected. Although he may consult other people or resources, the faculty member does the evaluation - no external evaluator is entering the scene and making judgements on the individual's abilities or course plans. Because of the extent to which the evaluation procedure is a part of the course development, the procedure must be flexible enough to accommodate many individual differences - differences due to discipline, level of the class, size of the class, teacher personality or style, and so on. Since no comparisons are being made, or rankings being done, differences in procedure become irrelevant.

There are three or four possible targets for a formative evaluation, although again these arbitrary divisions will tend to overlap in practice. The evaluation may be centered on the course, i.e., the content, organization, format, resources, etc. of the course. Although it is difficult to separate the "course" from the "teaching" the division has been a convenient one. There are times when one is interested in the teaching performance or skill in the classroom (e.g., ability to lead discussions, ask questions, speaking ability,

and so on). Or, one may be interested in the various roles a professor plays, as teacher, e.g., as evaluator of student learning, as seminar leader, as a facilitator of group work, as a model, as an advisor, and so on. In this sense, then, we can talk about evaluation of a course and evaluation of teaching as two separate targets. The third type of formative evaluation clearly overlaps with the others - program evaluation. Here the emphasis is on the integration of courses into a meaningful unit with goals or objectives of its own. The evaluation may look at the courses within the program, but the major purpose is to examine how each contributes to the program, and to plan possible changes in overall organization, philosophy, or goals. Closely related to program evaluation, but perhaps a separate category is the evaluation of special projects or innovations. As emphasized earlier, formative evaluation is an integral part of the development of the project, a constant monitoring of what is being done.

For the remainder of the discussion, I will concentrate on formative evaluation of teaching effectiveness; however, the distinction between "teaching" and "course" evaluation may not necessarily be maintained.

IV. General description of an evaluation approach.

There are several general concepts or principles which I would like to point out before discussing specific procedures. I believe each of these is essential foundations for the development of an evaluation procedure.

First, as mentioned earlier, the evaluation procedures must be flexible. No one evaluation process will be equally useful for all individuals; in fact, we have rarely found, at McGill, two individuals who conduct an evaluation in precisely the same way. Procedures vary dependent on the subject area, the level of instruction, the unique characteristics of the students or the professor. However, this does not mean that evaluation is done in a haphazard or unsystematic

fashion - we have found it possible to develop a systematic process which has in it room for most individual variations.

Secondly, since we are interested in evaluation as an improvement, or change process, it is necessary to have available, and linked to the process, the resources, materials and personnel for making the improvements. It is a common error that evaluation is embarked upon with no thought as to how changes will be made, or even what changes will be made. Facilities for the change process should be an integral part of the evaluation plan.

I have said that the professor is responsible for <u>doing</u> his own evaluation. How does a professor of history or mathematics know how to conduct an evaluation? Several approaches may be used: step-by-step written guides may be made available, evaluation consultants or specialists may work with each professor, the professor may be "taught" about evaluation procedures through workshops, modular instruction, or formal or informal class sessions. Regardless of the technique, some guidance must be provided. At McGill we use a variety of methods - workshops are given to groups of potential users, a User Guide is available, and an evaluation consultant is involved, to varying degrees, in each implementation.

A final basic principle, that may not even need stating, is one of confidentiality. Evaluation information is controlled solely by the professor involved - he may submit some information to colleagues or department chairman, but it is his decision. Case studies, or any information collected by the evaluation consultant is never released or used in any way without the professor's permission.

V. <u>An evaluation procedure.</u>

I will describe the steps of the Evaluation System used at McGill University. I began the development of this system nearly two years ago; this year it has been implemented on a pilot scale, and will be made generally available

by September. The basic steps are applicable to most types of evaluation done; however within this skeleton-framework, tremendous variation occurs.

Step One. The faculty member begins by describing the purpose of the evaluation - why the evaluation is being done, the nature of the course and/or the teaching situation and the types of changes that may be made as a result of the evaluation. This step focusses the evaluation plan, and encourages thinking about the nature of the evaluation to be done - emphasis is placed on questions such as "What is this course intended to accomplish?", "What changes am I willing to, or able to make?" Completion of the step may only involve stating previously thought-out plans, or may lead to considerable planning and reading in the area of evaluation, depending on the individual situation.

Step Two. The user further specifies what will be evaluated by examining teaching roles or skills and/or course functions. The professor decides what particular roles or skills are relevant to him (e.g., role of lecturer, seminar leader, course manager, etc., or skills of discussion leading, motivating students, explaining, organizing, etc.). Often priorities are established; i.e., concentration on a specific skill where weakness is suspected, or a role that is seen as vital to the particular course. Usually the function of the course is also considered at this time - is the course a prerequisite for other courses in the area, is it required or elective, is it advanced or concerned with basic skills, and so on.

Step Three. The user moves from the description of the target to the planning of the evaluation itself. Sources of information are selected (students, colleagues, professional associations, course notes and outlines) and the techniques for gathering the information are planned (interviews, questionnaires, observations, comments, videotapes, etc.). Specific instruments or questions to

be asked are not yet decided, only the strategies that will be employed. Most professors consider, at this stage, the strengths and weaknesses of the various techniques, and an attempt is usually made to settle on more than one technique to compensate for various deficiencies in each.

Step Four. Standards are considered next, before the information is actually collected. This is usually done at a fairly general level, asking questions such as, "What will I do if 70% of the students respond negatively to this question? Or 50% of the students?" A number of variables are considered such as personal or departmental priorities, the relative weights of the various issues being examined, the cost of planned changes. It is usually not possible or even desirable to attempt to establish definite criteria at this point; rather guidelines and priorites are discussed.

Step Five. Again as a part of the planning process, the professor looks in more detail at the types of changes he is willing and/or able to make. The emphasis here is on the available resources for change and the money and time required to make changes. We have found that the investigation of resources for change before conducting the evaluation tends to lead to a more constructive process. The professor becomes interested in and committed to the concept of improvement or change before information is gathered, evaluation loses its threat and often becomes more focussed, and evaluation and improvement become two aspects of the same process. Often the error is made of collecting a great deal of valuable information, then wondering "What do I do next?" The two processes should not be separate.

Step Six. The actual information-gathering techniques are selected and/or developed. Comprehensive resources should be available here - the quality of the evaluation hinges on this step. All too often a questionnaire is passed

from one person to another and used inappropriately simply because people do not know where to find alternatives. The role of evaluation consultants may also be emphasized at this stage.

Step Seven. Finally, the information is gathered, analyzed and interpreted. When the first six steps have been completed carefully, this last step becomes almost mechanical. I want to emphasize here that this is not the "end" of the evaluation. But the process becomes cyclical. The professor refers back to the resources explored in Step Five and the standards considered in Step Four. Changes are made, improvement strategies are implemented, further information is gathered, and so on. There will be occasions when one returns to even earlier planning stages and makes various modifications in the sources of information to be used, the teaching skills to be given priority, etc.

VI. A case study.

I will briefly describe an actual case study of an evaluation done with this system. The professor involved has given her permission for the evaluation to be used as an illustration; however, her name will not be used.

Prof. Smith approached the Centre for Learning and Development with a request for assistance with a course evaluation. She was referred to me and after a brief discussion I recommended our Evaluation System to her and set up an initial appointment.

Prof. Smith is from the Faculty of Education and has been teaching the same course for 12 years. She considers herself an innovative and concerned teacher and has always attempted to include some form of evaluation (usually a student questionnaire) in her course. However, she felt that she was not getting the kind of information she needed and was ready to embark on a "more comprehensive" evaluation.

At the first meeting she was introduced to the format of the evaluation system, given a User's Guide, and we began the discussion of Step One. Prof. Smith decided that she was mainly interested in looking at her teaching skills and peripherally the content and format of the course. Although she knew her students were generally satisfied, she wanted to think about possible changes or improvements, to possibly uncover problems she wasn't aware of, and generally, to check that she wasn't "in a rut" after teaching the course in the same way for 12 years. She was willing to make changes in her own roles in the classroom or to the format of the class sessions, but likely not to the course content. She planned to go through Steps 2, 3 and 4 of the process before we met again.

At the second meeting Prof. Smith discussed with me the results of her planning. She had delineated several teaching roles that were important to her: activity facilitator, group leader, evaluator of student projects, advisor model and discussion leader. More specific skills of relevance included: asking and answering questions, motivating students or providing an atmosphere conducive to growth and learning, and meeting the varied needs of individuals in the class. She described the course in detail - a small group of students in an elective course, with emphasis on activities and group work, student participation and involvement. Her major goals for the course were expressed in terms of growth and development for the students rather than in terms of knowledge gained or in terms of any absolute criteria. Three sources of information were selected: present students, graduated students and an "outside evaluator" or consultant. She planned to use a combination of interviews, questionnaires, comments, and observations. Standards were discussed in general terms. Given her concern for individual students in the class, Prof. Smith wished to consider all negative responses or comments, perhaps exploring the issue with the students if a minority

were expressing some problem. Student opinion would receive priority over information obtained from the outside evaluator. Together we discussed Step Five, the exploration of resources and means for making changes. Prof. Smith was already aware of most of the university's available resources - I described some of the Centre's materials, such as a modular course on teaching skills, and our teaching improvement process.

Step Six, the development of instruments, was attempted by Prof. Smith, using a number of the guidelines and resources connected with the Evaluation System. Student questionnaires were partly structured (ratings of her ability in the various teaching roles) and partly open-ended (questions on student growth and development). Interviews centered on the classroom activities in terms of their contribution to student growth and in terms of Prof. Smith's role as facilitator and model. A checklist was also developed as an aid in the classroom observations. These instruments were discussed during our third meeting; some modifications were made and times were arranged for interviews and observations.

The information gathered from these various techniques showed a generally positive attitude toward Prof. Smith's teaching skills and the format of the class. Some students felt, however, that more guidance should be provided for the in-class activities and that more information in the subject area should be given, especially for those students who did not have a background in the area. A few students asked for more structure in the discussions and more clearly defined course goals. Also, two students felt that evaluation based on growth was unfair to students starting at a higher level of performance.

In order to make changes in the course, Prof. Smith decided to improve her skills in defining course goals - she felt that this would assist her in dealing

with several of the issues raised by students. She would use objectives to structure class activities and discussions. She registered in a modular course on this topic and also attended a workshop on "contracting," intending to use this technique to further individualize evaluation of student progress. Changes are currently being implemented and further information collected, mostly in the form of informal comments and interviews, to monitor student response to the changes.

VII. Teaching improvement process.

One alternative to (or perhaps subset of) the comprehensive evaluation approach is the University of Massachusett's Teaching Improvement Process. At McGill this process is being used in both ways -- professors directly contact the process or are referred to it through the evaluation system.

The Teaching Improvement Process is concerned only with classroom performance, although it may overlap with course planning and organization. Twenty teaching skills have been delineated which are thought to be relevant across discipline and class types. They include such things as: ability to ask thought provoking questions, ability to wrap things up before moving on to a new topic, ability to make clear the relationship between major and minor topics, ability to inspire interest and excitement in the course, and so on. A professor starts the process early in the course, and works closely with a teaching improvement specialist throughout the semester. In the third or fourth week of the course, a questionnaire is given to the students, asking for ratings on each of the teaching skills. The scale used is "needs no improvement" to "needs much improvement" on five points. At the same class, the professor's teaching is videotaped. The professor then meets with the teaching improvement specialist to discuss questionnaire results and view the videotape. One or two problem areas are selected to be

worked on during the semester. Reading materials may be provided for the specific area of concern. The teaching improvement specialist may observe one or several classes, providing the professor with feedback on his progress. The videotape and questionnaire are repeated towards the end of the course, using only a subset of the questionnaire items, concentrating on the area(s) of weakness.

As opposed to the varying nature of the Evaluation System, this process follows a fixed routine for all professors. Generally, faculty response has been very positive; however, it has not been systematically evaluated.

VIII. Evaluating the Evaluation System.

During the pilot testing stage, an attempt is being made to evaluate the use of the system - the user guides, the resource materials, the role of consultants, the process itself, and the effect of the system on the nature of evaluations being done and on the types of changes made. A "discrepancy model" (Provost) is being used; i.e., a comparison of what the system was intended to accomplish and what is actually happening. This is being systematically conducted by a research associate, using interviews with clients and consultants, case studies, and the materials produced by professors for their own evaluations.

Although the evaluation is not complete, I will mention some issues that have arisen. One of the most common problems, related to the process and the content of the system, is one which we have called the "questionnaire syndrome." Very often a professor entering the evaluation system is not prepared for the type of planning we suggest, or for the number of alternatives available. The most common expectation is that they will be able to come in to the Centre and leave ½ hour later with a questionnaire to evaluate their course or teaching. At times, an initial discussion convinces the professor of the value of a more complete evaluation; at other times, he leaves with the questionnaire and is not

considered a "system user." We are not sure of the extent to which we should try to persuade individuals to be more thorough. Also we are not sure of the extent to which individuals should be able to use "pieces" of the system; i.e., enter and leave at Step Six (developing the evaluation instrument(s)).

A second problem, which I'm sure is common to all similar processes, is the perceived threat of evaluation. This is not as true for individuals who come to us for teaching or course improvement projects; however, we are also involved in program and administrative evaluations, where individual professors, who did not initiate the evaluation, have reservations. How can this fear be overcome? Should that be our role? When involved in a group evaluation, how do we work with the individual who does not particularly wish to be involved? Should the "majority rule"? Should we act as consultants for a chairman who is making evaluation compulsory when one of our principles is that the individual professor must agree to and be responsible for the evaluation procedures and results?

A third issue of interest is the role of the evaluation consultant. We perceive our role as being completely advisory, with the professor being responsible for his own evaluation. However individual expectations vary. Often a client comes to us expecting that we will do the evaluation, with his input guiding us; i.e., we will develop questionnaires, do interviews, analyze results, etc. If we are an evaluation service, we should be contributing in these areas. We have compromised with some individuals, taking a more active role; however, the implications in terms of our philosophy, time commitment and budget are great. The system was designed to be self-sufficient. Can it be? If not, the format and the entire nature of the process would require revision.

And finally, an issue that is relevant to all instructional development

personnel. How can we best reach the university community? Our current users tend to come from the professional schools - from education, medicine, management. Should one of our goals be to encourage users from the arts or sciences? If so, what is the best way to accomplish this? We have worked with individuals and groups from history, English and chemistry and believe that our procedures are flexible enough to accommodate their needs; however, involvement remains low.

IX. Summary.

In summary, I would like to emphasize what I see as the strengths of our approach to evaluation for teaching improvement. First, that a systematic approach is essential, with emphasis placed on the planning of the evaluation. Although this does require a greater time commitment on the part of all individuals involved, the benefits appear to be great. Second, an evaluation system of any kind must be closely linked with resources for both the evaluation itself and the implementation of change. Evaluation should be viewed as one component in a larger change process. Third, an evaluation system must be flexible enough to accommodate a great variety of individual styles, subject areas, and class types. The key to this flexibility lies in responsibility for the evaluation being with the professor himself rather than with an evaluator or instructional development staff.

Footnote

1. Invited colloquium delivered 6 March, 1978, to the Faculty of Education, The University of British Columbia. Sponsored by: The Standing Committee on Teaching (S.C.O.T.). Additional copies of this paper are available from S.C.O.T.